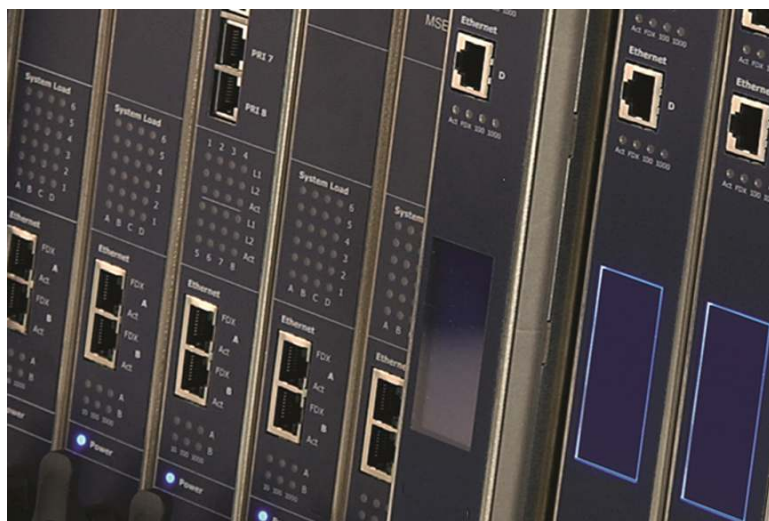


Cisco TelePresence Server MSE 8710

Product Overview

The Cisco TelePresence[®] Server is a pioneering solution that brings the immersive telepresence conferencing experience to the office worker and the mobile user. It works with a wide range of endpoints, delivering a smooth, predictable experience for every conference participant. The Cisco TelePresence Server MSE 8710 (Cisco TS MSE 8710) is a blade that operates within the Cisco TelePresence MSE 8000 Series (MSE 8000 Series) chassis (Figure 1).

Figure 1. Cisco TelePresence Server MSE 8710 Blade in the MSE 8000 Chassis



The Cisco TelePresence Server provides high-quality full high-definition (FullHD) telepresence conferencing and collaboration. Specifically engineered to deliver the full benefits of immersive conferencing, the Cisco TelePresence Server provides predictable, reliable high-quality video and content-sharing capabilities.

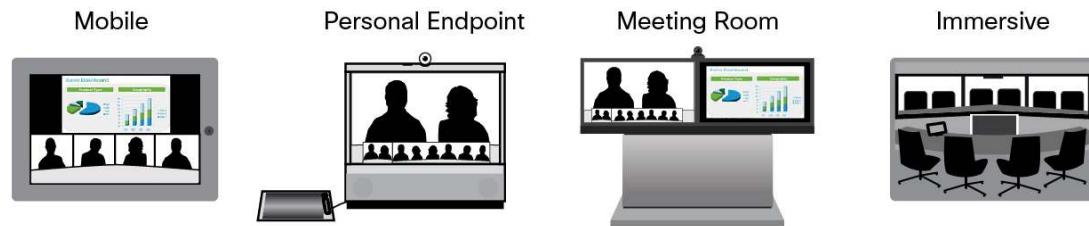
The immersive experience is available to users regardless of the type of endpoint they are using. With views optimized for meeting rooms, desktop, mobile devices such as Cisco Jabber running on the Apple iPad tablet, the Cisco TelePresence server delivers any-to-any telepresence conferencing. To enhance the experience, conference attendees can gain the full benefit of screen layouts specifically designed to meet their needs.

The Cisco ActivePresence[®] capability of Cisco TelePresence Server, a leading patent-pending feature, enables the delivery of next-generation multipoint conferencing, offering a view of all attendees in a meeting while giving prominence to the active speaker. While the active speaker occupies most of the screen, an overlay of others in the call appears in the lower third of the screen, giving participants a more natural view of everyone sitting around the virtual table (Figure 2).

Designed to meet the needs of organizations from small businesses to global multinationals, the Cisco TelePresence Server has a scalable architecture, enabling customers to start small and increase the scale of their solution as their business grows.

A critical requirement for all customers is ensuring a high return on investment. The MSE 8710 has a software upgrade path that enables customers to deploy new features on their initial hardware platform, and with a cost effective licensing model customers can closely manage their investment while reaping the rewards of lower travel expenses and increased employee productivity.

Figure 2. Examples of Cisco TelePresence Server Supported Modes



Benefits of Cisco TelePresence Server

- Improved productivity: All users enjoy a high-quality immersive conferencing experience, delivered to immersive room systems such as TX9000 series, and single-user systems such as the Cisco TelePresence System EX90 (EX90) and mobile devices such as the iPad tablet running the Jabber® application. Thus remote and home workers can collaborate more effectively and decrease their travel costs.
- High-quality immersive experience: Highly scalable conferencing is available to users with immersive, meeting room, or mobile endpoints.
- Maximized reach: Optimized views and standards-based interoperability allow any-to-any conferencing, helping ensure conferences are effective and support a wide range of participant endpoints.
- Integration with Conductor 2.0, which provides scalable ad-hoc conferencing, and enables increased efficiency:
 - Dynamic optimization: Make full use of Cisco TelePresence Server's conferencing capacity through the dynamic optimization of resources.
 - Conference service levels from SD with composited content through to FullHD video with FullHD content.
 - Mixed conference types (ad hoc and rendezvous) and mixed resolutions (SD to FullHD) on one blade.

Features

Table 1 lists the features of Cisco TelePresence Server.

Table 1. Features of Cisco TelePresence Server MSE 8710

Feature	Description
Design features	<ul style="list-style-type: none"> • Standards-based and compatible with major vendors' videoconferencing endpoints. • Highly scalable to meet current and future organizational needs. • Provides participants with the best possible view for their endpoint. • Provides easy-to-use and versatile management interface. • Designed to carrier-class levels of reliability and availability. • Provides a high-speed backplane supporting multi-blade Cisco TelePresence Server configurations.

Feature	Description
Application features	<ul style="list-style-type: none"> • Supports single and multiscreen Cisco TelePresence systems. • Interworks with Polycom RPX and TPX telepresence systems. • Integrates with Cisco TelePresence Management Suite (Cisco TMS), and Cisco TelePresence Conductor 2.0. • Cisco TelePresence Server capabilities can be combined with gateway capabilities in the same chassis. • Ability to select management mode, either locally managed or remotely managed (by Cisco TelePresence Conductor).
Performance features	<ul style="list-style-type: none"> • Cisco ActivePresence capability supports a full-screen immersive view of the primary speakers with an overlay of others in the call; it is designed to maximize the large-scale immersive telepresence experience. • Up to FullHD transcoding for both video and content is supported for every participant. • Cisco TelePresence Universal Port technology is supported. • SD to FullHD video resolutions are supported (up to 1080p30 or 720p60 frames per second [fps]). • Additional wideband audio ports are available. • The server supports up to 6Mbps bandwidth per screen. • Advanced Encryption Standard (AES) encryption is supported. • Integrated Cisco TelePresence ClearVision technology provides resolution enhancement. • Supports OneTable and Room-Switched configurations. • Up to FullHD (1080p30) or WUXGA (1920x1200)@ 27fps resolution content is supported.

Product Specifications

Table 2 lists technical specifications; Table 3 lists video, network, and audio specifications; and Table 4 lists network, management, and security specifications of the Cisco TelePresence Server.

Table 2. Technical Specifications

Feature	Description
Product compatibility	<ul style="list-style-type: none"> • Standards-based and compatible with major vendors' endpoints.
Video performance	<ul style="list-style-type: none"> • Scales up to 1080p30 or 720p60 at up to 6 Mbps including content with H.264. • Comprehensive HD audio is supported.
Universal transcoding and transrating	<ul style="list-style-type: none"> • Can combine immersive telepresence, HD and SD endpoints within the same virtual meeting. • Provides automatic audio and video transcoding along with transrating on all calls. • Each endpoint has its own decode and encode.
Application features	<ul style="list-style-type: none"> • The server offers four layout families for single screen endpoints including panel switched Cisco Active Presence. • Supports single- and multiscreen Cisco TelePresence systems. • The server can interwork with Polycom immersive telepresence systems while preserving the full Cisco ActivePresence view (requires feature key). • Participants can dial in or can be called from the web interface • The Cisco ActivePresence feature is standard on all ports. • Supports text identification of sites. • Built-in conference scheduling and reservation are supported. • On-demand and impromptu conferences are supported.
Scale	<ul style="list-style-type: none"> • The Cisco TS MSE 8710 supports up to 96 HD(720p30) or 48 Full HD (1080p30) screens per conference when four blades are clustered. • In locally managed mode each screen license enables 1 FullHD (1080p30) or 2 HD(720p30) screens. Maximum capacity is achieved with 12 screen licenses giving 12 FullHD or 24 HD screens with an additional 10 audio ports per blade. In remotely managed mode the maximum capacity is still achieved with 12 screen licenses giving 12 FullHD or 24HD or 48SD(w448p/480p30) resources, although the resources can be used more flexibly, please refer to table 6 for further details. • Up to a total of 104 calls are supported in one cluster of blades.
Content features	<ul style="list-style-type: none"> • Automatic content handover is supported. • Supports standard (4:3) and widescreen (16:9) content. • Dual Video is supported with H.239, Binary Floor Control Protocol (BFCP) or Auto Collaborate. • Picture in Picture: Video and content are composed into the video stream. • Each participant can have their own content transcoded at up to 1080p30 / WUXGA (1920x1200) @27fps.
Built-in web server	<ul style="list-style-type: none"> • Complete configuration, control, and monitoring of the system and conferences are supported.

Feature	Description
Language support	<ul style="list-style-type: none"> English is the standard language.
Chassis physical dimensions (H x W x D)	<ul style="list-style-type: none"> 33.25 x 17.2 x 20.5 in. (842 x 437 x 520 mm) (19 rack units [19RUs]) 19-inch rack-mountable (kit supplied)
Weight	<ul style="list-style-type: none"> 14.6 lb. (6.6 kg)
Power	<ul style="list-style-type: none"> Power: -48 VDC, 100-240 VAC, 50/60 Hz
Environmental data	<ul style="list-style-type: none"> Ambient operating temperature: 32 to 95°F (0 to 35° C) Relative humidity: Below 95% (noncondensing)
Approvals and Compliance	<ul style="list-style-type: none"> European safety: EN 60950-1 USA/Canada safety: UL 60950-1 CB Scheme Safety, IEC 60950-1 EMC: EN55022 class A, EN300 386, EN61000-3-2 EN61000-3-3, EN55024: EN61000-4-2,-3,-4,-5,-6,-11 FCC Part 15 class A, VCCI class A, AS/NZS CISPR 22 RoHS compliant, WEEE: http://cisco-returns.com

Table 3. Video, Network, and Audio Specifications

Bandwidth	<ul style="list-style-type: none"> Up to 6 Mbps with both H.263 and H.264, for each screen in all conference modes
Video standards	<ul style="list-style-type: none"> H.261 H.263 H.263+ H.263++ H.264
Video resolution	<ul style="list-style-type: none"> From QCIF up to 1080p (1920x1080) including interlaced iCIF and iSIF Aspect ratios: 4:3 and 16:9
Frame rates	<ul style="list-style-type: none"> Up to 60 frames per second
Audio standards	<ul style="list-style-type: none"> G.711 G.722 G.722.1 G.723.1 G.728 G.729 MPEG-4 AAC-LC MPEG-4 AAC-LD Polycom Siren14/G.722.1 Annex C
Audio features	<ul style="list-style-type: none"> Wideband audio mixing Ability to adjust endpoint audio gain through web interface

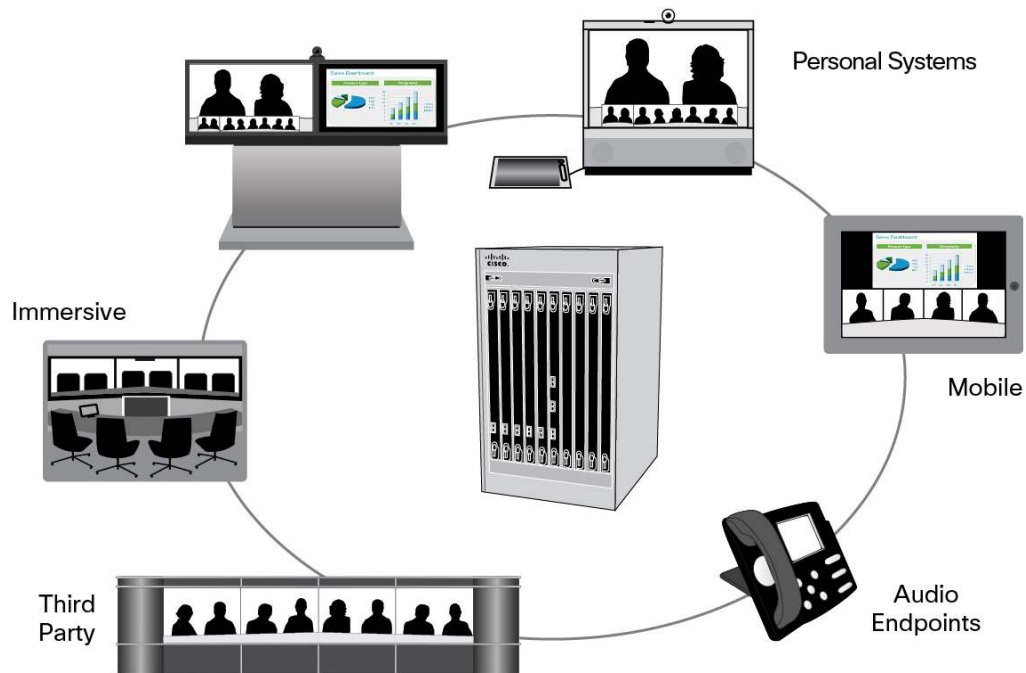
Table 4. Network, Management, and Security Specifications

Protocols	<ul style="list-style-type: none"> H.323 Binary Floor Control Protocol (BFCP) Network Time Protocol (NTP) Session Initiation Protocol (SIP) Telepresence Interoperability Protocol Version 7 (TIPv7) H.235 (AES) H.239 (dual video) FTP Real-Time Transfer Protocol (RTP) Real Time Streaming Protocol (RTSP) HTTP Secure HTTP (HTTPS) Dynamic Host Configuration Protocol (DHCP)
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Security features	<ul style="list-style-type: none"> • PIN-protected conferences • Conference locking • Secure non-PC hardware and operating system • Transport Layer Security (TLS) • Secure Real-Time Transport Protocol (SRTP) • AES encryption, 128-bit key, H.235
System management	<ul style="list-style-type: none"> • XML management application programming interface (API) • Management through embedded web server • RS-232 for local control and diagnostics • Configurable event logs and full H.323 and SIP decoding • Configuration backup to network • Secure upgrades through Ethernet
Quality of service (QoS)	<ul style="list-style-type: none"> • Configurable differentiated services code point (DSCP) or type of service (ToS)/IP Precedence
Network resilience	<ul style="list-style-type: none"> • Cisco TelePresence PacketSafe technology, which provides intelligent down speeding, packet pacing, and packet-loss concealment to ensure optimum video and audio quality • Dynamic jitter buffering
Interfaces	<ul style="list-style-type: none"> • R-45 Ethernet, 10-/100-/1000-Mbps full and half duplex, manual or auto-sensing • RJ-45 serial port

Figure 3 shows a graphic of the Cisco TelePresence Server interoperability Solution

Figure 3. Cisco TelePresence Server Interoperability Solution



Ordering Information

To order Cisco TelePresence Server MSE 8710, visit the [Cisco Ordering Home Page](#) and refer to Table 5.

Table 5. Ordering Information

Product Name	Part Number
Cisco TelePresence Server MSE 8710	CTI-8710-TS-K9
Cisco TelePresence Server MSE 8710 Screen License—initial purchase	LIC-8710-1SL
Cisco TelePresence Server MSE 8710 3rd Party multi-screen interop key—initial purchase	LIC-8710-TPI
Cisco TelePresence Server license PAK (Product Authorization Key) for post sale upgrades	L-8000-CHLIC-PAK
Start with L-8000-CHLIC-PAK in order to view the options listed below:	
Cisco TelePresence Server MSE 8710 Screen License—upgrade	L-8710-1SL
Cisco TelePresence Server MSE 8710 3rd Party multi-screen interop key—upgrade	L-8710-TPI

Note that maximum capacity is reached at 12 screen licenses per blade when running TelePresence Server software version 2.3 or later.

Table 6. Screen Licensing Model (Only applies to the TelePresence Server working in remotely managed mode, which requires an additional external application such as TelePresence Conductor 2.0)

Number of Endpoint Screens	Video Resolution	Content Mode	Max Audio	Screen Licenses Required
1	SD	In video	mono	1/4
1	SD	HD Presentation	mono	1/3
1	HD	HD Presentation	stereo	1/2
1	HD	HD	stereo	1
1	Full HD	HD Presentation	stereo	1
1	Full HD	Full HD	stereo	2
2	HD	HD Presentation	Stereo	1
2	HD	HD	Stereo	1 1/2
2	Full HD	HD	Multichannel	2
2	Full HD	Full HD	Multichannel	3
3	HD	HD Presentation	Multichannel	1 1/2
3	HD	HD	Multichannel	2
3	Full HD	HD	Multichannel	3
3	Full HD	Full HD	Multichannel	4
4	HD	HD	Multichannel	2
4	Full HD	Full HD	multichannel	4

SD = up to w448/480p30

HD Presentation = up to 720p resolution at less than 15fps

HD = up to 720p30

FullHD = up to 1080p30 / WUXGA (1920x1200) @ 27fps

Service and Support

Cisco offers a wide range of services programs to accelerate customer success. These innovative services programs are delivered through a unique combination of people, processes, tools, and partners, resulting in high levels of customer satisfaction. Cisco Services help you to protect your network investment, optimize network operations, and prepare your network for new applications to extend network intelligence and the power of your business. For more information about Cisco Services, visit [Cisco Technical Support Services](#) or [Cisco TelePresence Services](#) online.

For More Information

For more information about the Cisco TelePresence Server MSE 8710, please visit the [TelePresence Server](#) product page or contact your local Cisco account representative or authorized Cisco partner. Product specifications are estimates and subject to change without notice.



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